

AMERICAN MUSEUM NOVITATES

Number 631

Published by
THE AMERICAN MUSEUM OF NATURAL HISTORY
New York City

June 9, 1933

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FOUR NEW SPIDERS OF THE FAMILY GNAPHOSIDAE

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Through the courtesy of W. J. Gertsch, of The American Museum of Natural History, I have had the opportunity of examining two collections of Gnaphosidae, one largely from Minnesota, made chiefly by Mr. Gertsch himself, and the other from Alberta, Canada, constituting part of a general collection of spiders placed in his hands for identification.

The gnaphosids from the first collection, from Minnesota unless otherwise noted, prove to be as follows:

Herpyllus vasifer (Walckenaer)
Herpyllus hesperolus Chamberlin (Yosemite Park, Cal.)
Sergiolus variegatus (Hentz)
Gnaphosa gigantea Keyserling
Gnaphosa parvula Banks
Gnaphosa brumalis Thorell (Figs. 1 and 2)
Drassodes neglectus (Keyserling)
Drassodes robinsoni Chamberlin
Haplodrassus magister, new species
Haplodrassus signifer (C. Koch)
Drassyllus niger (Banks)
Drassyllus transversus (Emerton)
Zelotes subterreaneus (C. Koch) (Minnesota and Montana)

The specimens from Alberta, Canada, are as follows:

Callilepis imbecilla (Keyserling)
Gnaphosa gigantea Keyserling
Gnaphosa brumalis Thorell
Gnaphosa mima, new species
Gnaphosa parvula Banks
Callilepis imbecilla (Keyserling)
Drassodes neglectus (Keyserling)
Haplodrassus signifer (C. Koch)
Haplodrassus altanus, new species
Orodassus coloradensis (Emerton)
Orodassus vastus (Banks)
Zelotes subterreaneus (C. Koch)
Zelotes puritanus Chamberlin

The new species indicated are described below, together with a new *Gnaphosa* from Utah noted in the course of the present study. All of the species of *Gnaphosa* herein listed, or described, belong in a group to which this name should be restricted. Various other western species heretofore placed in *Gnaphosa* constitute a natural generic group which I here propose to designate as **CYLPHOSA** with *Gnaphosa gosoga* Chamberlin as the genotype. They are characterized especially by the obviously different palpal organ in which the very long style arises on the apical or ectal side of the bulb and coils loosely about the bulb one or more times. The apical apophysis is distally slender and pointed and characteristically membranous proximally.

***Gnaphosa mima*, new species**

Figures 3 and 4

MALE.—Integument of carapace and sternum dark brown, with a fine network of black lines over lateral portion of pars cephalica and in stripes running from the stria thoracica to lateral margins; the chelicerae and legs brown. Carapace clothed with whitish hairs closely appressed to surface and with very sparse, erect and long black hairs. Abdomen with a dense coat of fine, plumose brown hair and with numerous long, evenly spaced and erect black bristles, showing no color pattern; ventrally the abdomen appears paler in front of the genital furrow because of the absence of the dense coat of hair there.

All tarsi scopulate throughout length, the anterior metatarsus scopulate distally, the posterior metatarsi not scopulate. Metatarsi I and II with a pair of stout ventral spines. Ventral spines of tibia I, 1-2-2; of tibia II, 1-2-2, or 2-2-2. Tibiae III and IV with a spine at base on mid-dorsal line.

Cephalothorax low, the posterior portion of pars cephalica on a level with pars thoracica, slanting down moderately in front of middle; pars cephalica relatively narrow. Chelicerae moderately geniculate. Posterior row of eyes strongly recurved, the median eyes about their radius apart, approximately their diameter and a half from the laterals. Area of median eyes as long as wide posteriorly, a little narrower in front than behind (6:7). Anterior row of eyes procurved as usual, much shorter than the posterior row (4:3), the median eyes much smaller than the laterals.

Distinct in form of tibial apophysis and details of male palpal organ, as shown in the figures.

Measurements

Length of cephalothorax, 3.3 mm.; width, 2.9 mm.

| Legs: | I | II | III | IV |
|-----------------|-----------------|----------------|----------------|-----------------|
| Coxa-trochanter | 1.8 | 1.8 | 1.2 | 1.8 |
| Femur | 2.3 | 2.1 | 2.0 | 2.3 |
| Tibia-patella | 3.0 | 2.7 | 2.2 | 2.8 |
| Metatarsus | 1.8 | 1.5 | 1.7 | 2.8 |
| Tarsus | 1.2 | 1.1 | 1.2 | 1.2 |
| TOTAL | 10.1 mm. | 9.2 mm. | 8.3 mm. | 10.9 mm. |

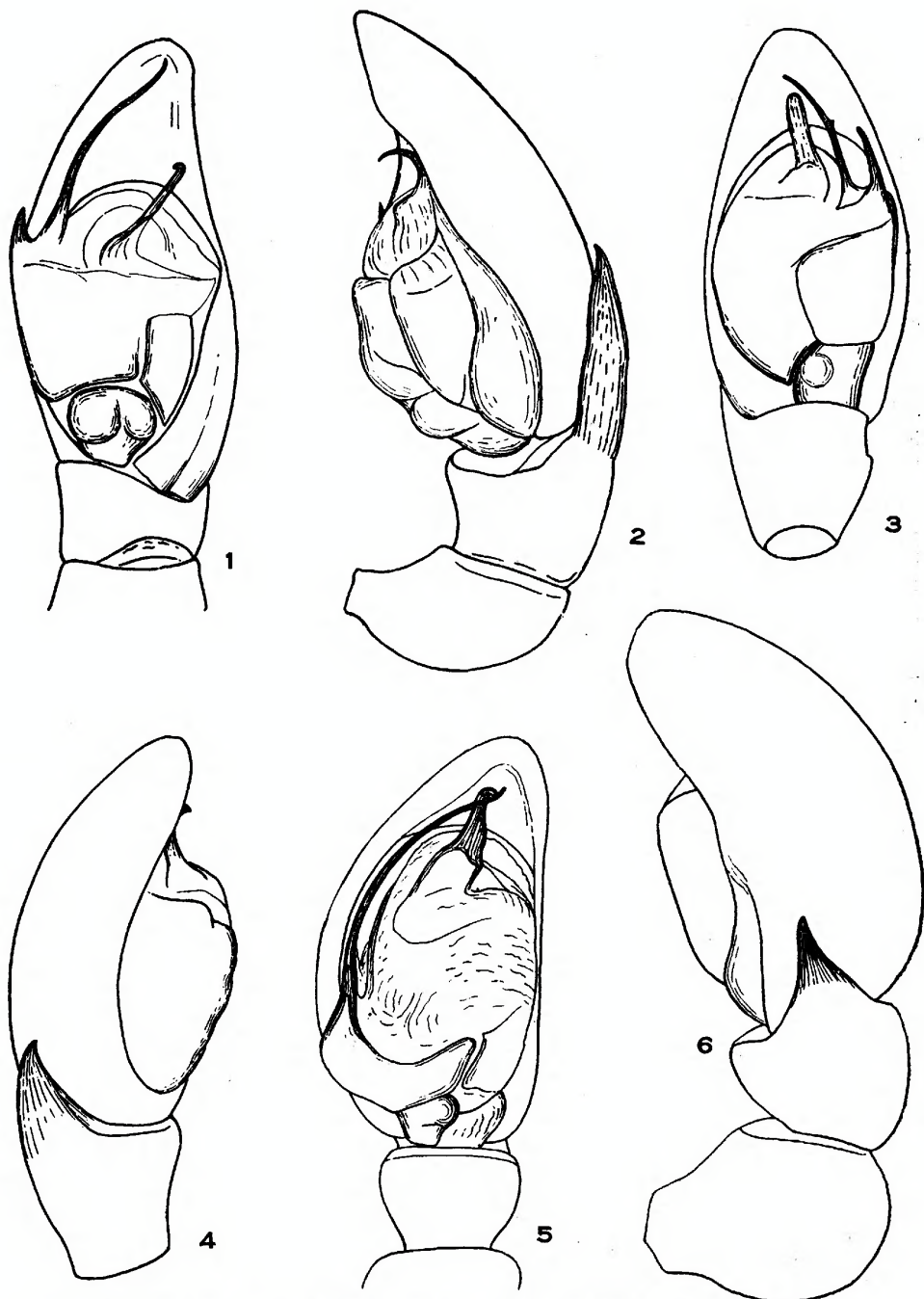


Fig. 1. *Gnaphosa brumalis* Thorell. Left palpus of male, ventral view.
 Fig. 2. The same, ectal view.
 Fig. 3. *Gnaphosa mima*, new species. Right palpus of male, ventral view.
 Fig. 4. The same, ectal view.
 Fig. 5. *Gnaphosa antipola*, new species. Left palpus of male, ventral view.
 Fig. 6. The same, ectal view.

LOCALITY.—Canada: Seba, Alberta; June 1–July 6. Two males (holotype and paratype) in the collection of The American Museum of Natural History.

Gnaphosa antipola, new species

Figures 5, 6, and 7

Carapace brownish black, the black being more condensed on head bordering the cephalothoracic furrow, along radiating furrow of thorax and along lateral borders. Sternum nearly black. Legs also black but with two last articles paler. Cephalothorax and legs clothed with the usual black hairs, the paler plumose hairs not conspicuous. Abdomen in the types appearing nearly black, clothed with the usual black hairs and setae and the fine appressed and paler plumose ones. The female allotype has cephalothorax and legs lighter in color.

Tarsi I and II entirely, and metatarsi I and II to their middle densely scopulate beneath, the posterior tarsi and metatarsi not at all scopulate. Tibia I in the male holotype is armed beneath with 1–1–2 spines, tibia II with 1–2–2 spines. Metatarsi I and II bearing one pair of ventral spines. Tibiae I and II in the female allotype bear beneath only 0–0–1 spines. Tibiae III and IV with a stout mid-dorsal spine at base.

Eyes typical in general arrangement and spacing. Anterior median eyes much smaller than the laterals (about as 7:10). Area of median eyes scarcely longer than wide, equal in width anteriorly and posteriorly. Posterior median eyes small, circular, about five-sixths their diameter apart and close to one and two-thirds times their diameter from the laterals.

Character of palpus as shown in the figures.

Measurements

MALE

Total length, 8 mm.

Length of cephalothorax, 4 mm.; width, 3 mm.

| Legs: | I | II | III | IV |
|-----------------|----------|----------|---------|----------|
| Coxa-trochanter | 1.9 | 1.8 | 1.8 | 2.0 |
| Femur | 2.9 | 2.3 | 2.0 | 3.0 |
| Tibia-patella | 3.2 | 2.9 | 2.5 | 3.2 |
| Metatarsus | 1.8 | 1.8 | 2.0 | 2.7 |
| Tarsus | 1.5 | 1.2 | 1.2 | 1.8 |
| TOTAL | 11.3 mm. | 10.0 mm. | 9.5 mm. | 12.7 mm. |

FEMALE

Total length, 8 mm.

Length of cephalothorax, 4.1 mm.; width, 3 mm.

| Legs: | I | II | III | IV |
|-----------------|---------|---------|---------|----------|
| Coxa-trochanter | 1.8 | 1.7 | 1.7 | 2.0 |
| Femur | 2.6 | 2.2 | 2.0 | 2.8 |
| Tibia-patella | 3.0 | 2.9 | 2.6 | 3.2 |
| Metatarsus | 1.3 | 1.5 | 1.9 | 2.7 |
| Tarsus | 1.2 | 1.1 | 1.2 | 1.3 |
| TOTAL | 9.9 mm. | 9.4 mm. | 9.4 mm. | 12.0 mm. |

LOCALITY.—Utah: Utah County, west shore of Utah Lake; October 15, 1931; male (holotype), female (allotype), and an immature male; collector, W. Ivie; in collection of the University of Utah.

Haplodrassus altanus, new species

Figures 8, 9, and 10

MALE.—Carapace and chelicerae light brown, the former with black lines running a short distance forward from region of median furrow along each side of pars cephalica and along the middle of the latter, the surface clothed sparsely with suberect dark hairs, and with more numerous appressed whitish hairs. Sternum similar in color to carapace, dusky laterally, clothed with more numerous erect dark hairs. Legs dull brownish-yellow. Abdomen dark brownish-gray, clothed with long dark suberect hairs and more densely with finer appressed and mostly lighter brown hair.

Legs with numerous stiff dark hairs and shorter pale ones, as usual. Leg one with femur and with two long seriate spines in dorsal line, two closer together toward distal end on anterodorsal surface; other joints unarmed excepting for a single ventral spine at base of metatarsus. Tibia II also unarmed, metatarsus II having a pair of ventral spines at base. Legs III and IV with numerous spines as usual, the tibiae with none in median dorsal position.

Cephalothorax low, the dorsal line nearly horizontal, the pars cephalica not elevated, broad, the head region relatively wide.

Anterior row of eyes procurved, the eyes nearly equal in size, the medians about their diameter apart and less than their radius from the laterals. Posterior row of eyes gently procurved, longer than the anterior row by nearly twice the diameter of a posterior lateral eye; median eyes oblong, set very obliquely to each other, their long diameter from the much smaller lateral eyes but less than half as far from each other. Area of median eyes a little wider in front than behind and nearly of same length as the anterior width. Anterior lateral eyes about their diameter from lower margin of clypeus. Chelicerae with armature typical except that in the holotype there is but a single tooth below on the right chelicerae, this being larger than usual; that of the other chelicerae normal.

Distinct in the form of the tibial apophysis of the palpus, this being laminate, rather short, and abruptly narrower distally as shown in the figure. Other features as figured.

FEMALE.—Coloration in general as in the male, but the abdomen above showing an obscure pattern of lighter marks as follows: a median basal mark on each side close to and parallel with it a mark vaguely broken into spots; behind the basal mark a series of chevrons scarcely detectable.

Femur of leg I with two seriate spines above and a single spine at distal end on anterodorsal surface; other joints wholly unarmed. Metatarsus II with two ventral spines at base as in the male holotype.

The cephalothorax similar in form but the head in eye region more depressed or slanting forward. Lower margin of chelicerae with two distal teeth.

Eye relations nearly as in the male, the anterior median eyes smaller than the laterals. Area of median eyes as broad posteriorly as anteriorly.

Epigynum as figured.

Measurements

FEMALE

Length, 9 mm.

Length of cephalothorax, 3.8 mm.; width, 3. mm.

| Legs: | I | II | III | IV |
|-----------------|----------|---------|---------|----------|
| Coxa-trochanter | 2.0 | 1.8 | 1.5 | 2.0 |
| Femur | 2.8 | 2.1 | 2.0 | 3.0 |
| Tibia-patella | 3.3 | 3.0 | 2.1 | 3.1 |
| Metatarsus | 1.2 | 1.1 | 1.0 | 2.0 |
| Tarsus | 1.0 | 1.0 | 1.0 | 1.2 |
| <hr/> | | | | |
| TOTAL | 10.3 mm. | 9.0 mm. | 7.6 mm. | 11.3 mm. |

MALE

Length, 6 mm.

Length of cephalothorax, 3 mm.; width, 2.2 mm.

| Legs: | I | II | III | IV |
|-----------------|---------|---------|---------|---------|
| Coxa-trochanter | 1.5 | 1.1 | 1.0 | 1.5 |
| Femur | 2.4 | 2.0 | 1.6 | 2.5 |
| Tibia-patella | 3.0 | 2.6 | 2.0 | 3.0 |
| Metatarsus | 1.5 | 1.1 | 1.1 | 1.8 |
| Tarsus | 1.1 | 1.0 | 0.8 | 1.0 |
| <hr/> | | | | |
| TOTAL | 9.5 mm. | 7.8 mm. | 6.5 mm. | 9.8 mm. |

LOCALITY.—Canada: east of Fitzgerald, Alberta; 1930; one male (holotype) and one female (allotype); collector, H. S. Hicks; in the collection of The American Museum of Natural History.

Haplodrassus magister, new species

Figures 11 and 12

MALE.—Carapace, sternum, and chelicerae light chestnut, the first pairs of legs similar or much paler distally, the last two pairs yellowish. Carapace with sparse dark hairs, the sternum with more numerous straight erect black hairs, which are denser along the borders. Abdomen with integument whitish with a light chestnut scutum at base above, clothed with numerous dark hairs but apparently less dense than that coat of appressed hair present in *H. altanus*, the rubbed condition of specimen making accurate judgment of this impossible.

Legs clothed with long stiff and suberect setae of dark color but with few finer appressed ones. Tarsus scopulate as usual but the scopulae not very dense; anterior metatarsi scopulate except at base, the posterior metatarsi scopulate only over apical region. Femur of leg I with two seriate spines above and one on anterior face distad of middle; femur II with two spines above and two on anterior face. Tibia and metatarsus I unarmed. Tibia II with ventral spines 1-1; metatarsus II with a pair of spines at base and a single median one. No mid-dorsal spines on tibiae III and IV.

Anterior row of eyes procurved in the usual degree; the median eyes somewhat smaller than the laterals, not fully their diameter apart and less than their radius

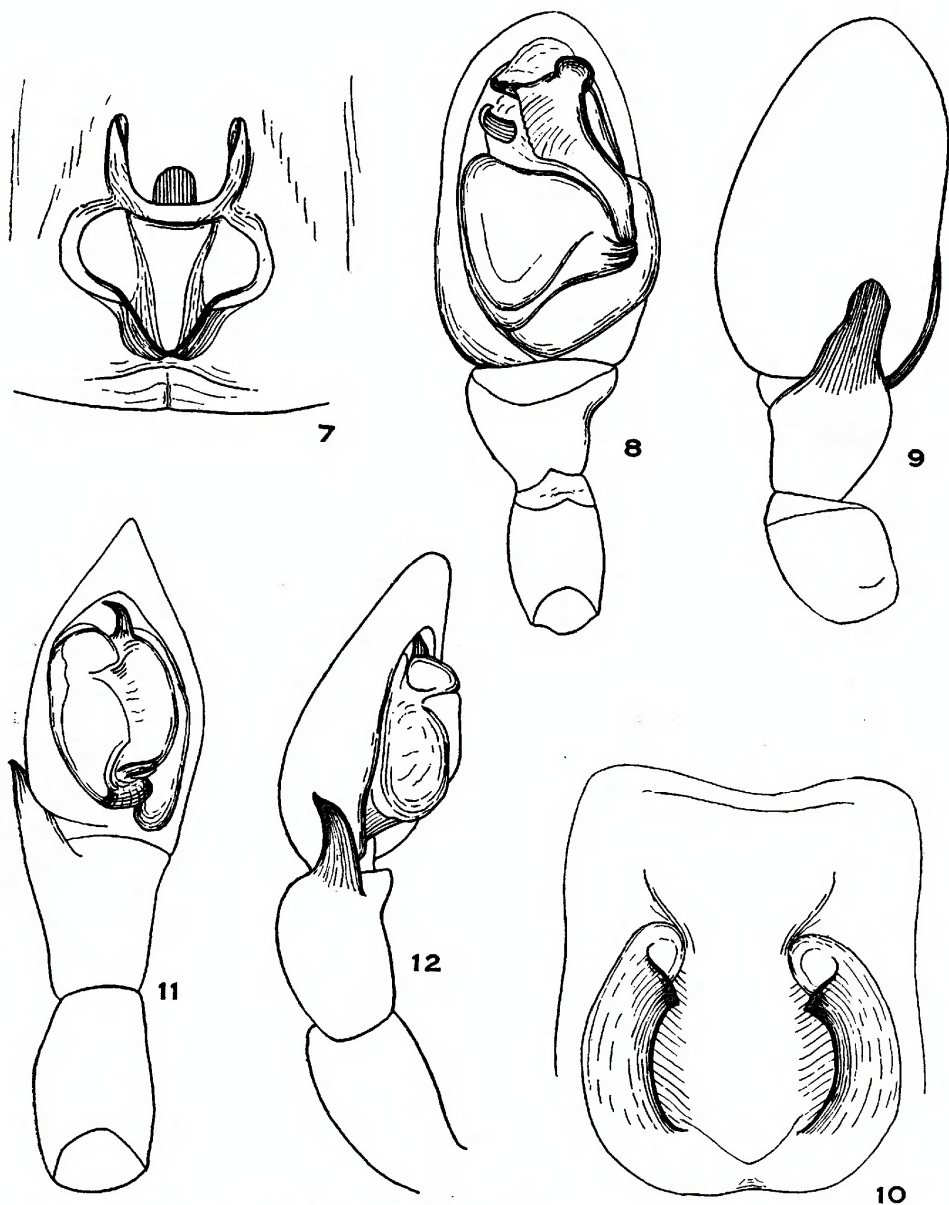


Fig. 7. *Gnaphosa antipola*, new species. Epigynum of allotype.
 Fig. 8. *Haplodrassus altanus*, new species. Right palpus of male, ventral view.
 Fig. 9. The same, ectodorsal view.
 Fig. 10. *Haplodrassus altanus*, new species. Epigynum of allotype.
 Fig. 11. *Haplodrassus magister*, new species. Right palpus, ventral view.
 Fig. 12. The same, ectal view.

from the laterals. Posterior row of eyes considerably procurved, only slightly longer than the anterior row; median eyes very large, their long diameter exceeding the diameter of a lateral one in about ratio 5:3, oblique, almost contiguous with each other, less than their radius from the laterals; lateral eyes less than their diameter from the anterior laterals. Area of median eyes wider behind than in front in about ratio of 5:4, the length nearly equal to the anterior width. Armature of chelicerae typical.

Tibial apophysis and features of palpal organ of male palpus as shown in the figures.

Measurements

Total length, 8 mm.

Length of cephalothorax, 3.9 mm.; width, 2.9 mm.

| Legs: | I | II | III | IV |
|-----------------|----------|----------|---------|----------|
| Coxa-trochanter | 2.2 | 1.8 | 1.5 | 2.0 |
| Femur | 4.0 | 2.8 | 2.0 | 3.2 |
| Tibia-patella | 4.4 | 3.3 | 2.9 | 4.6 |
| Metarsus | 2.2 | 2.0 | 1.9 | 3.4 |
| Tarsus | 1.8 | 1.3 | 1.2 | 1.8 |
| | <hr/> | <hr/> | <hr/> | <hr/> |
| TOTAL | 14.6 mm. | 11.2 mm. | 9.5 mm. | 15.0 mm. |

LOCALITY.—Minnesota: Minneapolis; June, 1931; one male (holotype); collector, W. J. Gertsch; in the Collection of The American Museum of Natural History.